

Project: Old Landfill - Hercules Aqualon, Hopewell, Virginia
Laboratory: Test America, Savannah, Georgia
Sample Delivery Group: HAQ033
Fraction: Inorganic
Matrix: Soil
Report Date: 9/3/2009

This analytical quality assurance report is based upon a review of analytical data generated for soil samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1.

The sample analyses were performed in accordance with the procedures outlined in "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, June 1997, and "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983.

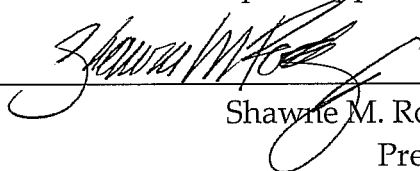
All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to general guidance provided in the Region III modifications to "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 10/2004. This document specifies procedures for validating data generated for CLP analyses. Therefore, the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data. The parameters presented on the following page were evaluated.

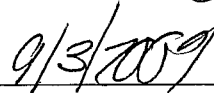
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- X • Data Completeness
 - X • Chain of Custody Documentation
 - X • Holding Times
 - X • Initial and Continuing Calibrations
 - X • ICP Interference Check Sample Results
 - X • Laboratory and Field Blank Analysis Results
 - X • Matrix Spike Recoveries and Reproducibility
 - X • Laboratory Duplicate Analysis Results
 - X • ICP Serial Dilution Results
 - Field Duplicate Analysis Results
 - X • Laboratory Control Sample Results
 - GFAA Post-Digestion Spike Recovery/Duplicate Burn Precision
 - X • Qualitative Identification
 - X • Quantitation/Reporting Limits
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X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:


Shawne M. Rodgers
President


Date

1.0 DATA COMPLETENESS

The data package was missing the metals interference check standard (ICSAB) recovery summary forms. The laboratory was contacted and provided the missing forms.

2.0 CHAIN OF CUSTODY DOCUMENTATION

All chain of custody documentation was complete.

3.0 HOLDING TIMES

All criteria were met. No qualifiers were applied.

4.0 INITIAL AND CONTINUING CALIBRATIONS

All criteria were met. No qualifiers were applied.

5.0 ICP INTERFERENCE CHECK SAMPLE RESULTS

All criteria were met. No qualifiers were applied.

6.0 LABORATORY AND FIELD BLANK ANALYSIS RESULTS

All criteria were met. No qualifiers were applied.

7.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY

All criteria were met. No qualifiers were applied.

8.0 *LABORATORY DUPLICATE RESULTS*

All criteria were met. No qualifiers were applied.

9.0 *ICP SERIAL DILUTION RESULTS*

All criteria were met. No qualifiers were applied.

10.0 *FIELD DUPLICATE RESULTS*

There were no field duplicate samples provided for the samples in this SDG. Therefore, the sample data could not be evaluated based on this parameter.

11.0 *LABORATORY CONTROL SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

12.0 *GFAA POST-DIGESTION SPIKE/DUPLICATE BURN*

This parameter is not applicable to the analyses performed.

13.0 *QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

14.0 *QUANTITATION/REPORTING LIMITS*

As required by USEPA protocol, all inorganic analytes which were qualitatively identified at concentrations between their respective

quantitation limits (QLs) and their method detection limits, have been marked with "J" qualifiers to indicate that they are quantitative estimates.

METHODOLOGY REFERENCES

Analysis	Reference
Lead	Method 6020, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, June 1997

Table 1 Samples For Data Validation Review
Hercules-Aqualon Old Landfill
Soil Samples Collected March 2009
TestAmerica Laboratories Sample Delivery Group HAQ033

SAMPLE I.D.	LABORATORY I.D	DATE COLLECTED	MATRIX	ANALYSES PER	
				LEAD	
LSS-1	680-45632-1	3/18/2009	Soil	X	
LSS-2	680-45632-2	3/18/2009	Soil	X	
LSS-3	680-45632-3	3/18/2009	Soil	X	
LSS-4	680-45632-4	3/18/2009	Soil	X	
LSS-5	680-45632-5	3/18/2009	Soil	X	
EB-1	680-45632-12	3/18/2009	Equipment Blank	X	

Analytical Data

Client: Groundwater & Environmental Services Inc

Job Number: 680-45632-1

Sdg Number: HAQ033

Client Sample ID: LSS-1

Lab Sample ID: 680-45632-1

Client Matrix: Solid

% Moisture: 22.1

Date Sampled: 03/18/2009 1620

Date Received: 03/19/2009 0852

6020 Metals (ICP/MS)

Method: 6020

Analysis Batch: 680-133655

Instrument ID: ICP MS - A

Preparation: 3050B

Prep Batch: 680-133309

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 1.11 g

Date Analyzed: 03/25/2009 1549

Final Weight/Volume: 1000 mL

Date Prepared: 03/23/2009 1111

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Lead	✓	17000		100	350 ✓

Analytical Data

Client: Groundwater & Environmental Services Inc

Job Number: 680-45632-1

Sdg Number: HAQ033

Client Sample ID: LSS-2

Lab Sample ID: 680-45632-2

Date Sampled: 03/18/2009 1630

Client Matrix: Solid

% Moisture: 19.0

Date Received: 03/19/2009 0852

6020 Metals (ICP/MS)

Method: 6020

Analysis Batch: 680-133655

Instrument ID: ICP MS - A

Preparation: 3050B

Prep Batch: 680-133309

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 1.05 g

Date Analyzed: 03/25/2009 1556

Final Weight/Volume: 1000 mL

Date Prepared: 03/23/2009 1111

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Lead	✓	18000		100	350

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Analytical Data

Client: Groundwater & Environmental Services Inc

Job Number: 680-45632-1

Sdg Number: HAQ033

Client Sample ID: LSS-3

Lab Sample ID: 680-45632-3

Date Sampled: 03/18/2009 1635

Client Matrix: Solid

% Moisture: 20.0

Date Received: 03/19/2009 0852

6020 Metals (ICP/MS)

Method: 6020

Analysis Batch: 680-133655

Instrument ID: ICP MS - A

Preparation: 3050B

Prep Batch: 680-133309

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 1.02 g

Date Analyzed: 03/25/2009 1603

Final Weight/Volume: 1000 mL

Date Prepared: 03/23/2009 1111

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Lead	✓	22000		110	370



Analytical Data

Client: Groundwater & Environmental Services Inc

Job Number: 680-45632-1

Sdg Number: HAQ033

Client Sample ID: LSS-4

Lab Sample ID: 680-45632-4

Date Sampled: 03/18/2009 1640

Client Matrix: Solid

% Moisture: 18.6

Date Received: 03/19/2009 0852

6020 Metals (ICP/MS)

Method: 6020

Analysis Batch: 680-133655

Instrument ID: ICP MS - A

Preparation: 3050B

Prep Batch: 680-133309

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 1.15 g

Date Analyzed: 03/25/2009 1610

Final Weight/Volume: 1000 mL

Date Prepared: 03/23/2009 1111

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Lead		45000		94	320

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Analytical Data

Client: Groundwater & Environmental Services Inc

Job Number: 680-45632-1

Sdg Number: HAQ033

Client Sample ID: LSS-5

Lab Sample ID: 680-45632-5

Date Sampled: 03/18/2009 1650

Client Matrix: Solid

% Moisture: 16.9

Date Received: 03/19/2009 0852

6020 Metals (ICP/MS)

Method: 6020

Analysis Batch: 680-133655

Instrument ID: ICP MS - A

Preparation: 3050B

Prep Batch: 680-133309

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 1.06 g

Date Analyzed: 03/25/2009 1703

Final Weight/Volume: 1000 mL

Date Prepared: 03/23/2009 1142

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Lead		18000		100	340

OR
8/31/09

Analytical Data

Client: Groundwater & Environmental Services Inc

Job Number: 680-45632-1

Sdg Number: HAQ033

Client Sample ID: EB-1

Lab Sample ID: 680-45632-12

Date Sampled: 03/18/2009 1745

Client Matrix: Water

Date Received: 03/19/2009 0852

6020 Metals (ICP/MS)-Total Recoverable

Method: 6020

Analysis Batch: 680-133669

Instrument ID: ICP MS - A

Preparation: 3005A

Prep Batch: 680-133353

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 50 mL

Date Analyzed: 03/24/2009 2216

Final Weight/Volume: 250 mL

Date Prepared: 03/23/2009 1429

Analyte	Result (ug/L)	Qualifier	MDL	RL
Lead	0.19	J	0.15	1.5

